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**ORIGINAL**

**CHEMICAL PLANT GROUNDWATER OPERABLE UNIT PUBLIC MEETING**

**7:00 P.M.**

**REPORTED BY: Mary T. Webb, CCR #972**

**TAYLOR & ASSOCIATES**

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CHEMICAL PLANT GROUNDWATER OPERABLE UNIT PUBLIC MEETING

7:00 P.M.

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BE IT REMEMBERED, that on the 13th day of August, 2003, the herein-described parties met at Weldon Spring Site, Highway 94, County of St. Charles, State of Missouri, in a certain matter being presented in the manner as appears hereinafter.

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1 PAMELA THOMPSON: Hello. Try to get  
2 everybody -- so we have enough chairs. We have more  
3 chairs that we can bring out. If we can get everybody  
4 seated.

5 Are you comfortable? Are you sitting too close  
6 to your neighbor? No need to stand for this whole  
7 presentation.

8 Thanks, everybody for coming tonight. I am Pam  
9 Thompson. I am the Department of Energy Project Manager  
10 here for the Weldon Spring Site. I'm glad to welcome you  
11 to our public meeting on our proposed plan for the final  
12 remedial action for the groundwater operable unit at the  
13 chemical plant area of the Weldon Springs Site.

14 I would like to first recognize many of the  
15 participants, people who have helped put this plan  
16 together for the public tonight.

17 First I'd like to introduce Dave Gieser. He is  
18 from our Office of Legacy Management, our long-term  
19 maintenance and surveillance from Washington, D.C. Dave.

20 Many of you know Dave from our work with him on  
21 our stewardship plan. He's been out in the public. You  
22 should recognize Dave.

23 I'd also like to recognize Ray Plienness. He is  
24 our project from our Grand Junction office who is the  
25 oversight office for the Weldon Spring Site.

1 From the State of Missouri, I would like to  
2 recognize Mimi Garstang, state geologist with the  
3 Missouri Department of Natural Resources and Geological  
4 Survey Research Assessment Division; is that right?

5 We also have Bob Geller here from the Federal  
6 Facilities Group from the Hazardous Waste of the Missouri  
7 Department of Natural Resources.

8 We have Gale Carlston from the Missouri  
9 Department of Health and Senior Services.

10 We have Kathy Love from the Missouri Department  
11 of Conservation.

12 John Vogel from the Missouri Department of  
13 Conservation, Busch Wildlife Area manager. Martin Boyer,  
14 also with the Department of Conservation.

15 We have Gene Gunn from the United States  
16 Environmental Protection Agency, Region 7, and Dan Wall  
17 from the Environmental Protection Agency, Region 7.

18 We have Mike Duvall from St. Charles County  
19 Environmental Division.

20 We have Ben Moore from Missouri Department of  
21 Natural Resources here at the Weldon Spring Site office.

22 And what you see me doing is scanning around to  
23 make sure that I recognized the state and local and  
24 federal folks.

25 We also have from our elected organization, we

1 have Jim Midas representing Todd Akin. Jim has been  
2 participating with us through the stewardship program and  
3 tonight.

4 We have Peter Price from the Missouri  
5 Department of Natural Resources, Geological Survey  
6 Resources Assessment Division. And Mimi from that same  
7 group.

8 We have Rick Hampel who is the chairman of the  
9 Weldon Springs Citizens Commission.

10 Members of the Commission are here tonight. We  
11 have Paul Midler, also a member of the Citizens  
12 Commission; Don Price, Fritz Hoffmeister, Tom Nelson,  
13 Dee Dee Aubuchon.

14 You're not raising your hands now. Raise your  
15 hands. Dee Dee Aubuchon.

16 Anybody I've skipped? All right.

17 We have Larry Erickson here from the Missouri  
18 Department of Natural Resources.

19 And if I have missed someone, I apologize. But  
20 I did want to make sure that you knew that your local,  
21 state and federal government was represented here to talk  
22 you about this proposal.

23 A few things I wanted to remind you it is non-  
24 smoking. If you need to smoke, then you can go outside,  
25 and there's receptacles outside.

1           You see the two exits. The restrooms are here  
2 to the right. You go through there, and there's a  
3 women's restroom on the left and men's restroom on the  
4 right. There's a drinking water fountain in there.

5           I think that takes care of the facilities.  
6 What I'd like to do now is to get Ray Plieness, who is  
7 the office manager for our Grand Junction office.

8           Ray.

9           RAY PLIENESS: Thank you, Pam.

10          My job this evening I will try to establish the  
11 process to get through this agenda as quickly as possible  
12 with the full intent of getting conversation back and  
13 forth and getting public input on our proposed plan.

14          So we're going to try to get this over and be  
15 done. Tom Pauling will give you a quick overview of the  
16 plan of the proposed plan fairly quickly. We'll have a  
17 few agency comments. Not listed, we'll allow the  
18 Missouri Department of Conservation to have a quick  
19 comment also.

20          But what we really want to get to is the public  
21 question and comment period. So --

22          AUDIENCE: Can you speak up a little?

23          RAY PLIENESS: Can I speak up a little?  
24 Yes, I can speak up.

25          Now, if we go to the next slide, we're going to

1 this overview of how we're going to facilitate public  
2 influence. Again, after a quick break, which actually  
3 will be between the agency comments and the public's  
4 opportunity to speak. This is a requirement of CERCLA to  
5 provide the public an opportunity to comment on anything  
6 that we do on a decision-making process.

7 Right now, that's a 30-day public comment  
8 period. That starts on August 4th with the publication,  
9 notification in the newspaper that we outlined our  
10 proposed plan, made to the public for review, and this  
11 particular meeting is strategically placed about halfway  
12 between when we sent it out, the proposed plan, and then  
13 you have to have your final comments completed by  
14 September 3rd.

15 This is an introduction from us and an  
16 opportunity for you to comment. You still have until  
17 September 3rd to comment in the final phase. We will  
18 have a stenographer here. It will be a meeting that is  
19 developed as a transcript and a public administrative  
20 record ultimately at the end of this.

21 We will have a facilitator. And our  
22 facilitator, which I'll introduce, will be Wendee Ryan.  
23 At the end of the period with the agencies, we'll have a  
24 facilitator with the full expectation to keep people on  
25 target and within some timeframes, because our goal is to



1 allow everybody a chance to speak this evening that has  
2 an interest to speak. And everybody can hear the  
3 responses to those comments that they may want to  
4 present.

5 So one of the key elements is that we want to  
6 keep the remarks relative to the proposed plan. This  
7 meeting has been established to be done about nine  
8 o'clock. If you want to talk about something on the site  
9 other than the proposed plan, the staff is committed to  
10 stay and talk about that. But as you comment this  
11 evening, please try to focus your comments on the  
12 proposed plan and only the proposed plan. We want to  
13 give everybody a chance to comment on that.

14 Actually, as it works out, if we get through  
15 all the comments and you have another comment and we're  
16 allowed time, we'll try to recycle and get everybody  
17 through again if there's an interest to do so.

18 There are comment cards, a blue card in your  
19 folder. It's intended that you can use that to write  
20 your comment down and help to make it a little easier to  
21 read from. It will also allow if you don't want to get  
22 up and make a comment or provide one to us this evening,  
23 there's a box in the back, you can just stick that  
24 comment card right there, and it will become part of the  
25 public record as part of the Response Summary at DOE that

1 will ultimately come out of this process here.

2 With that, I'd like to go to the next slide,  
3 and remind everybody this is not your last time to  
4 comment. So, if you're not sure what you want to say  
5 yet, you're still in the education process, the next  
6 phase of this is to give you a quick overview. Tom  
7 Pauling will do that. And you have until September 3rd  
8 via mail or fax to submit your comments.

9 So, if there are no questions on that process,  
10 I'd like to get right into the agenda. But I'd like to  
11 give a chance -- does everybody kind of understand how  
12 we're going to follow through?

13 If there's no questions, I'll ask Tom to try to  
14 go right through the proposed plan. We have the proposed  
15 plans on the table over here. So, if you didn't get one,  
16 then you can -- did everybody get one? If not, we can  
17 get you one, because his presentation basically follows  
18 you right through that proposed plan based on the  
19 sections. So you can follow along, and he's going to try  
20 to explain DOE's ideas on that particular section and why  
21 we believe this is the best proposed plan.

22 If there are no questions, I'll just ask Tom to  
23 proceed. Tom.

24 TOM PAULING: Thank you.

25 Now this slide shows the key points of the main

1 topic of the proposed plan. I'll just point out in  
2 advance there are some drawings we attempted to reproduce  
3 in the handout. They're not as clear as they could be,  
4 and there are some color versions of those slides that  
5 you may want to pick up later if you want any more  
6 detailed drawings.

7 So these are the main topics, and we'll just  
8 proceed with those.

9 One of the main concerns, of course, in  
10 understanding groundwater is, well, how did it  
11 contaminated? A lot of you are familiar with the  
12 operations at the site, but I just wanted to briefly  
13 cover the main activities here.

14 Of course, during World War II, this area, as  
15 well as the area west of us was a large ammunition  
16 production area where the Army made TNT and DNT. Some of  
17 that activity was here, at these sites. The TNT lines  
18 were the lines that were on this site.

19 From the mid '50s to the mid '60s, the Atomic  
20 Energy Commission processed uranium for this site. Part  
21 of the process involved storage and disposal of materials  
22 on the ground in large pits. Some of the sediments,  
23 contaminated sediments, were deposited in ponds near the  
24 perimeter of the site. There were dump areas with a  
25 sewer line. These areas contributed significantly to the

1 groundwater contamination.

2 In the mid '60s to mid '80s, there was a period  
3 of almost no activity. The Army did come in and dumped  
4 some of the buildings and some of the material from those  
5 buildings into the pits. But also just a series of  
6 deterioration occurred that contributed to groundwater  
7 contamination, and additional waste and materials that  
8 were inside the building became exposed and rainwater was  
9 able to contact that waste and percolate into the  
10 groundwater.

11 Also the activities that we have conducted  
12 primarily in the mid '90s to just recently excavating the  
13 soil and excavating and pumping the sludges and treating  
14 them, placing them into a disposal cell. Going after  
15 thousands of drums that were deteriorated in the pits.  
16 Most likely mobilized some additional contaminants to the  
17 groundwater.

18 But that cleanup is now complete. The waste  
19 has either been shipped off site. There's very little  
20 that went off site, but some of the organics went off  
21 site. And the area was treated, sludges disposal or were  
22 treated, and the rest placed in disposal cells. So the  
23 source removal is complete and the waste that's on site  
24 is isolated primarily in the disposal cell.

25 Current groundwater, spring water conditions,

1 we have four categories of contaminants. The  
2 trichloroethylene solvents. Again, that waste primarily  
3 entered the groundwater from disposal of drums containing  
4 that material in the pits. It has not currently reached  
5 any of the springs in the area.

6 Nitrate, again, primarily from the pit area,  
7 the use of nitric acid. It is more widespread, it's more  
8 soluble, it has traveled further and it has reached  
9 springs north of the site.

10 Uranium is in two wells near the area of the  
11 pits. And that has also reached springs both north and  
12 south of the site.

13 Nitroaromatics are in several locations on  
14 site, and then drainage south of the site.

15 These drawings that you have depict that in  
16 picture format. These contours are color-coded regarding  
17 the contaminants.

18 This drawing shows the nitrate, the TC and the  
19 uranium. These contours show the outermost extent of the  
20 contamination based on the standards that are applied,  
21 the groundwater standards for those contaminants.

22 This other drawing shows nitroaromatics. Both  
23 of these drawings have sketched in the areas that we're  
24 talking about that are the principal areas that  
25 contribute to the contamination. Here we've sketched in

1 some of the old process lines that the Army had. And you  
2 can see this contamination, in some respects, falls where  
3 the activity occurred.

4 Groundwater flow studies, I take this  
5 opportunity to introduce Ms. Cato, who is here, is our  
6 site geologist, and she'll be available to help answer  
7 questions on this subject.

8 Contamination is primarily confined to the  
9 uppermost bedrock unit. It's fractured limestone with  
10 horizontal fractures and flows to the northwest. Now  
11 I'll use this drawing over here that helps illustrate  
12 that. This is -- I know many of you are not familiar  
13 with this type of drawing. It shows a number of things.

14 The red-dashed line shows the groundwater  
15 divide so that rain water that's percolated into the  
16 ground north of this line flows to the north and, of  
17 course, south flows to the south.

18 These blue lines are developed by measuring  
19 water levels in the wells and establishing through these  
20 elevations that groundwater gradually flows in this  
21 direction as these elevations decrease.

22 And you can perhaps see where these two areas,  
23 where slight troughs exist, where water flows into those  
24 areas and then flows to the north/northwest. And this,  
25 this area here, is Burgermeister Spring, which is where

1 most of the shallow ground water expresses itself in this  
2 area.

3 Current groundwater use, there really is no  
4 groundwater use in the impacted area. There are no  
5 drinking water wells or agricultural wells, and over the  
6 years, the Department of Health, Health and Senior  
7 Services has developed a program of sampling wells in the  
8 surrounding area, and has not attributed any  
9 contamination, any source contamination to this site in  
10 the wells.

11 A summary of risks is another negative  
12 component of this plan. Mary Picel of Argonne National  
13 Laboratories is here, and has been our principal source  
14 of these risk assessments.

15 Again, the purpose of these is to evaluate the  
16 protection of human health and the environment. We've  
17 used EPA-standardized risk methodologies. We had one of  
18 our workshop during the stewardship phase of the  
19 discussions.

20 The current recreational and military training  
21 uses continue to remain very safe. There are very  
22 conservative assumptions that go into these calculations.  
23 The only exposure to the groundwater from these  
24 activities would be encountering water at the springs,  
25 and we've run calculations that would assume that a

1 visitor could come as many times as twenty times a year  
2 and drink the water for thirty years and still have very  
3 little risk of an increase of cancer.

4 We also calculated that in the future certainly  
5 the land could change in use, and residences could pop  
6 up. The assumption would also be that they're going to  
7 access the shallow groundwater for drinking purposes,  
8 which, although not likely, could happen. And there are  
9 situations, there are places within some of the most  
10 contaminated areas where the calculated risk would not be  
11 acceptable from the EPA's standpoint.

12 That is some of the background that has led us  
13 up to this final phase. In looking at remedial action  
14 objectives of the groundwater, first and foremost is the  
15 effect of the human health and the environment,  
16 compliance with, again, what EPA calls applicable or  
17 relevant or appropriate requirements. It's kind of the  
18 regulatory term for the standards that would apply. And  
19 in this case, it would be primarily drinking water  
20 standards for the dump.

21 The other objective is to ensure that the land  
22 use during the remediation timeframe remains consistent  
23 with the restriction that we would expect to meet in  
24 order to keep people from being exposed to contaminated  
25 water.



1           So these are the -- what criteria did we  
2 evaluate? Well, back in 1999, we issued a proposed plan  
3 to the public. We had gone through a series of  
4 evaluations, and the outcome of that was that principally  
5 that the State of Missouri believed that we should  
6 further investigate and do additional work to evaluate  
7 some of the alternatives more.

8           And what resulted was an interim record  
9 decision for the treatment TCE in place and additional  
10 study that we closely coordinated with Missouri DNR to  
11 enhance the conventional program to pump and treat. At  
12 their direction and with their assistance, we drilled  
13 angle wells for extraction to explore the possibility of  
14 encountering larger amounts of water through that method.  
15 We injected clean water into the aquifer upstream in  
16 order to try to flush the contaminants out.

17           Although there was some success on a local  
18 scale, we encountered difficulties and determined that  
19 these didn't provide any enhancement over what we had  
20 already tested.

21           There is a lot more detail about those studies  
22 in the supporting evaluation, which is a separate  
23 document from the proposed plan, which we mailed out and  
24 is also available.

25           So what we took forward then for evaluation was

1 these three alternatives and no further action, which EPA  
2 always requires people to keep in as sort of a point of  
3 reference. And then long-term monitoring with  
4 institutional controls and monitored natural attenuation  
5 with institutional controls, contingency activities.

6 These are the criteria that EPA laid for how to  
7 evaluate these alternatives. There, again, we give them  
8 categories. The threshold criteria are you must meet  
9 those in order to get further evaluation. The other --  
10 the five in the middle there are balancing criteria,  
11 whereby you assess one alternative's relative benefit  
12 over the others. And then finally the modifying criteria  
13 is to get the state and community to accept these  
14 alternatives.

15 The next slide is an attempt to briefly  
16 summarize the evaluation. There is certainly more detail  
17 in the supporting evaluation. Just going all the way  
18 over here, what I really want to emphasize on this line  
19 is, in our opinion, monitored natural attenuation with  
20 the institution controls, the contingencies, offer a  
21 greater level of protectiveness, which is really what we  
22 were after here.

23 Go to the next slide just to cite some of those  
24 points. Under our proposal, MNA, monitored natural  
25 attenuation, would establish performance monitoring that

1 would require additional well construction, more frequent  
2 sampling, more analysis. We would have -- would supply a  
3 rigorous data trending, determine whether the processes  
4 are working as predicted, and the parameters are  
5 decreasing over time.

6 There would be target concentrations that would  
7 trigger contingency activities. Some of those activities  
8 would include increased monitoring frequency, more  
9 monitoring of locations, in the case of TCE,  
10 trichloroethylene.

11 Since that has not mobilized very far, we are  
12 committed to taking action should our prediction not turn  
13 out to be correct, and come back and do an active  
14 chemical oxidation treatment for a second time once those  
15 trigger levels are established.

16 So it's really been a very aggressive active  
17 monitoring approach. It entails a commitment to meet the  
18 standards through the years, the objectives within a  
19 reasonable timeframe. And the EPA has the job of  
20 assessing what's reasonable.

21 Our predictions are that these contaminants  
22 will reach those acceptable standards in about a hundred  
23 years. Some less than that, but that's the long end.  
24 And that's reasonable by their definition, but also  
25 reasonable in comparison to what else we could do.

1 Remembering that the pump-and-treat activity and chemical  
2 oxidation that we attempted we would not expect to be  
3 successful. And so you would end up waiting these  
4 hundred years for these standards to be met anyway.

5 Key component of this remedy is institutional  
6 controls to maintain and protect this. We have a high  
7 expectation of success since we're dealing primarily with  
8 state and federal governments, landowners that surround  
9 this property. We're not going to restrict any of the  
10 current uses. In fact, even future uses could change,  
11 but we do need some restrictions so it's not an  
12 unrestricted use in the future.

13 And the long-term surveillance and maintenance  
14 plan is really the document that will assure that all  
15 this is implemented over this long period of timeframe.

16 Let's go over to this drawing. This is a  
17 drawing of the site, and I don't know if this turned out  
18 very well on your copies. The groundwater that's  
19 contaminated into one shaded area. The institutional  
20 controls boundary proposed that we're proposing would  
21 include a 1000-foot buffer zone around that. It's  
22 primarily protection from the well that could draw  
23 contamination towards it instead of the direction it's  
24 going now. And it includes the springs to the north that  
25 are contaminated with some of the contaminants.

1           It also includes institutional controls on the  
2 southeast drainage to the Missouri River, which has a  
3 couple of contaminated springs in it.

4           This just shows the supporting documents that  
5 we have developed over the years. We have those out.  
6 Looks like they've all been scarfed up. Anyone who  
7 didn't get one and wants one, they're certainly available  
8 and we can get you a copy.

9           This demonstrates that we've been studying  
10 groundwater for a long time and a lot of information  
11 about it, and is available for this proposed remedy.

12           The last slide is one you've seen. It's just a  
13 reminder of how to get your comments to us. Take that  
14 home.

15           RAY PLIENESS: Thank you, Tom.

16           I recognize that was very quick. The intent  
17 was to give a quick overview for those that haven't a  
18 chance to read the proposed plan and save most of our  
19 time for the public comment.

20           But before we do that, we'd like to spend a  
21 little time and provide an opportunity for the regulatory  
22 community and state agencies to provide input on their  
23 thoughts on the proposed plan.

24           At this time, I'd like to introduce Mimi  
25 Garstang with the Missouri Department of Natural

1 Resources for a comment from her organization.

2 Mimi.

3 MIMI GARSTANG: Thanks, Ray.

4 First of all, I want to thank so many of you  
5 who have taken the time to be here tonight. I think one  
6 of the most important things for staff that are here from  
7 the Missouri Department of Natural Resources is to listen  
8 to you tonight and hear what your concerns and what your  
9 comments are.

10 We, too, have prepared comments to present  
11 tonight. I wanted to admit that it's actual been  
12 difficult for me to put together comments tonight.

13 One reason is because, on one hand, I think  
14 we're really close to a good remedy to the contaminated  
15 groundwater at this site. However, on the other hand, I  
16 feel like that there are still too many unknowns, things  
17 that haven't been decided about the remedy that creates  
18 concerns for the Missouri Department of Natural  
19 Resources. And I'm going to talk about that a little bit  
20 more.

21 You realize that we're quickly approaching the  
22 last record of decision at the Weldon Spring Site, and I  
23 doubt if anyone is more anxious than the Missouri  
24 Department of Natural Resources is to finish up the good  
25 work that's been started here at the site.

1           Some of you are also aware that we have put off  
2           the decision on the groundwater here. One reason is  
3           because it is a complicated issue, and we want to try to  
4           come up with the best remedy that's protective.

5           We wanted to make sure that a conservative  
6           remedy is in place and a sound remedy to address the  
7           groundwater contamination. First and foremost, we want  
8           the plan to be protective of the people that live and  
9           work and play near this site, as well as we expect the  
10          plan to be protective of the St. Charles County and how  
11          fast it is growing and will continue to grow in the  
12          future.

13          And as a neighbor, we believe that the Missouri  
14          Department of Conservation needs to feel comfortable that  
15          there aren't unacceptable risks at their property, and  
16          that people that use their property are not being faced  
17          with any unacceptable risks.

18          After listening to Tom's presentation, I know  
19          you're aware now that the proposed plan leaves  
20          contaminated groundwater at this site. Now our staff,  
21          our technical staff at DNR, highly respect the abilities  
22          and the knowledge of the technical staff that work here  
23          at the Weldon Spring site, and we want to work together  
24          with them to come up with the a good solution. We, too,  
25          have very good technical in the Missouri Department of

1 Natural Resources.

2 Now both sets of technical staff agree that a  
3 traditional groundwater remediation technology here at  
4 this site is going to be very difficult because of the  
5 complex geology and hydrology. We also agree that the  
6 likelihood of it being totally successful, even if we try  
7 it, is probably slim. And it's because of those reasons  
8 that we have been willing to consider a passive  
9 remediation of the groundwater or this concept of  
10 monitored natural attenuation.

11 However, DNR can only consider supporting this  
12 type of remedy under certain conditions. One condition  
13 is that DNR become a full partner to a long-term  
14 agreement for future decisions and management of this  
15 site in the future. And we will continue to work towards  
16 that major goal with the Department of Energy and EPA.

17 And we want to do this so that we can properly  
18 represent the public's concerns well into the future.

19 The other condition is agreeing to the details  
20 of the sound monitoring plan with defined contingencies  
21 to activate if the conditions worsen at the site instead  
22 of improving.

23 The Department of Natural Resources noted very  
24 early to the Department of Energy that monitored natural  
25 attenuation for leaving the contaminant groundwater in



1 place to dilute and disperse on its own would be an  
2 acceptable remedy only if we could agree on the specifics  
3 of how to monitor this contaminated groundwater to prove  
4 to ourselves, as well as prove to you, that the  
5 groundwater conditions are clearly improving and not  
6 getting worse.

7 All the technical staff do tend to agree that  
8 we expect the groundwater to attenuate. But due to the  
9 geologic and hydrologic complexities at this site, we  
10 cannot make any assumptions. Instead we must collect the  
11 proper data over time to prove that this remedy is  
12 protective and not creating unacceptable risks.

13 Nothing would please DNR anymore than if we  
14 were standing in front of the public together with EPA  
15 and DOE saying we are all agreeing and support  
16 wholeheartedly a recommendation. And we are confident  
17 that we can get to that point.

18 But I have to tell you tonight that we are not  
19 there yet. We have previously prepared detailed  
20 technical comments on the draft proposed plan addressing  
21 our concerns. And so far most of them have not been  
22 addressed in the final proposal.

23 Now I will not go through any of those detailed  
24 comments tonight. I just want to give you an example of  
25 one important issue. That issue is the vertical depth of

1 the TCE contamination has not yet been identified. That  
2 has been in our comments, and we believe that both the  
3 vertical and horizontal extent of all contaminants must  
4 be identified before we are comfortable that we're  
5 putting the proper institution controls in place and that  
6 the groundwater is attenuating properly. This is part of  
7 the data that we must have to prove to you and to  
8 ourselves that this remedy is truly protective.

9 We want you to know that the State is committed  
10 to finalizing a sound remedy and record of decision for  
11 the groundwater at this site. We will do whatever it  
12 takes to resolve the outstanding issues.

13 However, as I said before, we will insist that  
14 this remedy is conservative and protective of the people  
15 that live, work and play near this site. We will  
16 continue to insist through our formal parlance on this  
17 proposed plan that a sound monitoring plan is in place to  
18 either prove or disprove that the remedy is performing as  
19 expected and a contingency plan is identified to activate  
20 if the remedy appears to fail or if the unexpected  
21 occurs.

22 DNR will also continue to actively pursue an  
23 official seat at the table for future site actions,  
24 decisions and oversight in the public's behalf.

25 All of you here tonight are well aware that

1 it's going to take all of us working together as  
2 partners, not working against each other, to successfully  
3 institute the proper institutional controls and long-term  
4 surveillance need to keep this site safe well into the  
5 future.

6 I do want to thank the Department of Energy for  
7 allowing us to comment tonight. And I also want to  
8 encourage all of you to take advantage of this  
9 opportunity to let us know what your concerns and your  
10 comments are.

11 Thanks.

12 RAY PLIENESS: Thank you, Mimi.

13 Another perspective from the State will come  
14 from our neighbors, the Missouri Department of  
15 Conservation, whose land is adjacent to ours.

16 Ms. Kathy Love will give their perspective.

17 KATHY LOVE: Thank you, Ray, and thank  
18 you, Pam, also, for making time on the agenda for us.

19 I'm just going to read a brief statement that  
20 addresses our comments on the proposed plan.

21 The public can trust to the Missouri Department  
22 of Conservation the care and management of the land and  
23 its resources surrounding the Weldon Spring Site Remedial  
24 Action Project. These public areas, known as the  
25 August A. Busch Memorial Conservation Area and the Weldon

1 Spring Conservation Area, are enjoyed by half a million  
2 visitors per year.

3 As population and development continue to grow  
4 in St. Charles and surrounding counties, this expected  
5 public use of these conservation areas will also grow.  
6 We take our responsibility to ensure the safety and  
7 enjoyment of these visitors very seriously.

8 Groundwater underlying these two areas is an  
9 essential component of their resource health.  
10 Contamination that lasts for one hundred, five hundred or  
11 one thousand or more years compromises our ability to use  
12 the natural resources in a way that ensures our visitors'  
13 safety and health.

14 We are well aware of calculations that show  
15 little risk at anticipated exposure levels. However,  
16 we're also aware that such calculations may change with  
17 regard to specific contaminants, and the conditions over  
18 time may increase the exposure levels. All these factors  
19 require that groundwater contaminants be monitored and  
20 treated to the extent technology makes possible.

21 We will consider monitored natural attenuation  
22 an acceptable alternative under the following  
23 circumstances. If the state and federal agencies agree  
24 the groundwater remediation is not technically feasible  
25 at this time. If the state and federal agencies agree to

1 revisit the issue as new technologies become available  
2 regardless of changes in exposure risks. If the state  
3 and federal agencies collect data that demonstrate to our  
4 agency and the public that the contamination is, in fact,  
5 not spreading or affecting ecosystems on the Department  
6 of Conservation property.

7 Additionally we question the efficacy of  
8 several trigger points in the contingency action in the  
9 proposed supporting evaluation, and request the following  
10 monitoring practices be adopted.

11 When TCE levels exceed drinking water  
12 standards, five micrograms per liter, in any unweathered  
13 zone well, alternative remedial action should be  
14 initiated regardless of the TCE concentration in the  
15 plume.

16 The trigger point of twenty micrograms per  
17 liter as indicated in the document is unacceptable, and  
18 remedial action should not be dependent on contaminant  
19 levels in the plume.

20 Similarly, at Burgermeister Spring, active  
21 remedial alternatives should be implemented when TCE  
22 levels reach five micrograms per liter regardless of  
23 concentrations in the plume.

24 Fish tissue samples should be conducted  
25 annually to inform the public about the safety of fish

1 consumption from the Department of Conservation lakes and  
2 the effectiveness of monitored natural attenuation.

3 At Burgermeister Spring, the trigger point for  
4 uranium should be 100 picocuries per liter not 300 as the  
5 document indicates. Additional monitoring of wells whose  
6 number and placement coincide with recommendations by the  
7 Missouri Department of Natural Resources should be  
8 created to determine the current vertical and horizontal  
9 extent of contamination and to confirm plume locations  
10 and attenuation.

11 We would like to emphasize the need to  
12 aggressively monitor groundwater contamination. By  
13 allowing contaminated groundwater to continue to spread  
14 to this high public use area, the Department of Energy is  
15 effectively removing the value of the groundwater  
16 resource from the Conservation Department property.

17 We respectfully request that the proposed plan  
18 for final remedial action for the groundwater operable  
19 unit, that the chemical plant areas of the Weldon Spring  
20 Site be revisited with these concerns in mind.

21 Thank you for the good progress made to date  
22 and your willingness to address and resolve remaining  
23 contamination problems.

24 RAY PLIENESS: Thank you, Kathy.

25 The regulator that responds directly to those

1 things we need to do on this site is the EPA. The EPA is  
2 going to provide a comment this evening. That comment  
3 will be presented by Mr. Dan Wall.

4 Dan.

5 DAN WALL: Thank you, Ray.

6 Hello, everybody. I've been associated with  
7 the Weldon Spring site for roughly eighteen years now.  
8 So I know many of you pretty well. And I know quite a  
9 bit about the site, both past and present.

10 My job as a representative of EPA is to stay  
11 engaged on the project and ensure that the DOE conducts  
12 activities that are consistent with what's required under  
13 the law, the National Contingency Plan and program  
14 expectations.

15 I also occasionally offer some welcome input,  
16 and it's hard to comprehend that this somewhat, thin,  
17 unimposing plan actually has fifteen years of study and  
18 analysis behind it. We've been gathering -- or DOE has  
19 been gathering data out there. As I say, folks, you  
20 know, on groundwater for a good fifteen years or so.  
21 We've got -- been monitoring literally hundreds of  
22 monitoring locations.

23 There's been a thorough analysis for prospects  
24 for accumulative technology that involves, aquifer  
25 testing, have technology vendors to come in and discuss

1 prospects of their technologies. There was scale  
2 testing, pilot testing and such. Tom went over most of  
3 that.

4 And the reason I bring that up, the point I'm  
5 trying to make is that this is not really a snap decision  
6 or a decision that resulted from foregone conclusion or  
7 anything like that. It's really a highly considered  
8 proposal. And the result of that is that I think EPA is  
9 prepared at this point to agree that the monitored  
10 natural attenuation solution in the form presented,  
11 scoped out here in this proposal is the appropriate and  
12 reasonable approach.

13 I guess I'd like to address what I sort of see  
14 as a misconception. I could be wrong, but maybe I'm  
15 overinterpreting. But this is not a decision to do  
16 nothing. It's not a decision to forego active  
17 remediation.

18 It is the decision, it is a judgment, and it  
19 represents a judgment that the active remediation  
20 methods, pump-and-treat, that were tested out were not  
21 particularly effective, were not effective for what I  
22 will call a full-scale deployment. The hydrogeology is  
23 not particularly suitable for these types of techniques.

24 The other thing to consider is that it's  
25 localized or limited deployment for these sorts of



1 actions and are not expected to have a measurable impact  
2 on the capacity to achieve the remediation goals over  
3 time. So, in effect, they don't meet a cost effect as a  
4 test.

5 You could apply some of them, both the  
6 localized areas, you would still be faced with same  
7 long-term management problem. And I guess I would also  
8 add that's not an unusual situation. The Weldon Spring  
9 site is not unique in that regard. I would say that  
10 most, if not virtually all, hazardous waste site cleanups  
11 involve groundwater remediation. Even those where it  
12 involves sandy aquifers and conditions where treatment is  
13 considered effective, are left with a residual condition  
14 that often needs to be managed for the foreseeable future  
15 and beyond.

16 So no one should think that this is an inferior  
17 approach simply because we have residual that needs to  
18 manage for the foreseeable future.

19 I think it's -- we're fortunate in this case  
20 that that long-term management is doable. There is no --  
21 the sources of the contamination have been removed, so  
22 there's no ongoing contribution to the groundwater. We  
23 don't have non-aqueous phase, contaminant plumes that  
24 will continue to lead to groundwater contamination for  
25 years.

1           So we're really looking at a situation that we  
2 expect to be defined from here in terms of it being a  
3 problem. We don't -- I don't see potential for  
4 significant exposure to the general public under current  
5 land use and groundwater use conditions. There's no  
6 particular pressure to use that impacted groundwater for  
7 drinking water purposes or for other uses that might  
8 cause exposure.

9           Most of the impacts are on public land, which  
10 makes it relatively easier to implement institutional  
11 control, although those are always problematic.

12           I guess that's the majority of the points I  
13 wanted to make. I think this is a good plan. It should  
14 be pointed out that this is a plan in concept. We fully  
15 expect to continue to work on this sort of thing as Mimi  
16 was discussing. There will be a record of decision  
17 process. There'll be the comment. There'll be the  
18 process of addressing the comments that are received  
19 here, and there'll be a remedial design and remedial  
20 action development process that will follow.

21           So we expect to have the opportunity to  
22 continue to work through the specifics of how this plan  
23 will be developed.

24           And with that, I guess I'd like to thank all  
25 the stakeholders that have participated. The Department

1 of Energy, the Department of Natural Resources, the  
2 Department of Health, Department of Conservation, the  
3 Citizens Commission, the St. Charles County Government.  
4 Hope I didn't leave anybody out because I really believe  
5 that people paid more than just lip service to the  
6 concept of cooperation here. I think we worked through a  
7 true -- and it's a truly successful consensus process.  
8 And I expect it'll continue through the design and we'll  
9 be able to get resolved the issues that the State has  
10 with how this plan will be carried out.

11 That's all I have.

12 RAY PLIENESS: Thank you, Dan.

13 With that, I'd like to get on with providing  
14 opportunities for the public to have their comments. I'm  
15 going to go over the stenographer again. The reason we  
16 transcribe this particular meeting is it does become part  
17 of the public record so that anybody can read it,  
18 understand who said what. The transcript is part of the  
19 administrative record. We here today will provide  
20 comment/responses to the draft responses. I want  
21 everybody to know if you need a response to your specific  
22 comment, assuming there is time under the request for  
23 time to give a response, that will be the draft response.  
24 Each comment given here tonight will get a full response  
25 in our Responses Summary. And that will be our official

1 DOE response to that comment. We'll try to give a quick  
2 overview of what comment might be this evening, but those  
3 are really just drafts. We finalize that with a written  
4 response to each comment.

5 We will have a facilitator, Wendee Ryan, in the  
6 back. Her full job will be to try to accommodate time  
7 and subject matter, and try to keep us on the fact we  
8 want comments on this proposed plan.

9 If you have a comment card, you're welcome to  
10 read it yourself. If you feel uncomfortable reading the  
11 comment card, you can hand it to -- put it in the box or  
12 hand it to Wendy Drnec, the box is there by Wendee Ryan,  
13 and we will be glad to read your comment and respond to  
14 it.

15 At this point, I'd kind of like to get a few -  
16 - how many people would like to comment either by having  
17 a card in the box or by presenting their own comment so  
18 we can establish kind of a timeframe on how long each  
19 person may have.

20 So if you were planning to have a comment, I'd  
21 ask you to raise your hand.

22 AUDIENCE: (Show of hands.)

23 RAY PLIENESS: One, two, three, four,  
24 five, six, seven, eight, nine, ten, eleven --  
25 approximately fifteen. Somebody else may decide they

1 want to, fine.

2 That leaves us approximately four -- three to  
3 four minutes per comment. Please, remember, even if you  
4 don't get all your comments to us today, you still have  
5 written opportunities up until September 3rd.

6 So, with that, I guess we could start  
7 immediately unless everybody wants to take a quick break.  
8 If not -- you want to take a five-minute break, or would  
9 you rather just proceed? I'm going to leave that up to  
10 the group. Proceed? Proceed. Let's just do that.  
11 Okay.

12 Let's go ahead and start with comments, and  
13 we'll just work our way around the room, if that's fair  
14 for everybody.

15 PAMELA THOMPSON: Ray, would you like to  
16 get a group up in the front that might be able to speak  
17 or have comments?

18 RAY PLIENESS: Do you want to have them up  
19 front?

20 AUDIENCE: Yes.

21 RAY PLIENESS: Those that may answer a  
22 question, please proceed to the front of the room.

23 Let's proceed with the comments. You can  
24 either stand there, or you're welcome to take over here.

25 DON PRICE: I'll stand here. I have four

1 pages on your presentation that I have some quick  
2 questions on.

3 On Page 6, you talk about current groundwater  
4 and spring water conditions. On each of those four  
5 folded items, could someone give proximate distances on  
6 each of the areas there? Such as in the first one, you  
7 would say it's not near the pit area or it's in the pit  
8 area but not in the springs.

9 So, if you could, just using the map, give a  
10 quick estimation of feet or yards.

11 TOM PAULING: Well, the drawings, maybe if  
12 you get a better copy, you'll be able to see the legend  
13 at the bottom that shows the scale.

14 DON PRICE: I had the drawing there. What  
15 I want to clarify, which area, which spring. So rather  
16 than me estimating the distance, I'd like the authority  
17 to estimate the distance. If that's okay.

18 TOM PAULING: The distance from the pits,  
19 or the entire length of a plume or --

20 DON PRICE: No, no. From the pit area,  
21 and then you say it's not the springs.

22 So you're saying it's not my house, but it's  
23 close to yours. What's the relative distance?

24 RAY PLIENESS: I think he's referring to  
25 Figure 3; is that correct?

1 DON PRICE: You used that. Points on  
2 No. 6. You state that TCE is near the pit area but not  
3 in the springs.

4 TOM PAULING: Right.

5 DON PRICE: Identifying those two points,  
6 what's the relative distance?

7 REBECCA CATO: It's approximately a mile.

8 DON PRICE: Okay. One mile.

9 REBECCA CATO: To Burgermeister Spring.

10 TOM PAULING: One mile.

11 DON PRICE: The second area, an area two  
12 springs north of the site.

13 REBECCA CATO: Two springs north of the  
14 site?

15 DON PRICE: Yeah.

16 REBECCA CATO: You want to know how --  
17 it's the same spring. Burgermeister Spring and the  
18 spring north of the site, we refer to it --

19 DON PRICE: Okay.

20 REBECCA CATO: And it's about a mile, yes.

21 DON PRICE: The next item on that one is  
22 the same? Distance of spring north and to the south, and  
23 springs to the south of this drainage.

24 REBECCA CATO: These are contour figures  
25 and shows -- I don't know, maybe half a mile to the first

1 spring, a mile to the second.

2 TOM PAULING: It's 6000 feet, so a mile  
3 plus to the lowest spring.

4 DON PRICE: It's a mile plus from springs  
5 north of the site?

6 TOM PAULING: That's south.

7 DON PRICE: South.

8 DON PRICE: And the last one: When you  
9 say they're inside the locations, being southeast  
10 drainage; correct?

11 REBECCA CATO: Same two springs, right.

12 DON PRICE: Okay.

13 My next question is clarification on Page 11.  
14 Again, it has to do with distances. Just as a point of  
15 clarification, you state no drinking wells or  
16 agricultural wells are in the area of groundwater  
17 contamination.

18 TOM PAULING: We're talking about this  
19 area here would being encompassed by the institutional  
20 control.

21 DON PRICE: Yeah. But, again, what is the  
22 distance that you say they're not in the area.

23 REBECCA CATO: Approximately a mile to the  
24 springs. So about a mile from the site, and then -- I  
25 don't know. 2000 feet off the western boundary, a half



1 mile. There's a 1000-foot buffer around the  
2 contamination plume.

3 DON PRICE: Okay.

4 Then I guess, on Page 12, the third bullet item  
5 was a little confusing there because throughout all the  
6 approaches you were talking about use of straw, and I  
7 assume institutional controls. But then the Bullet 3  
8 says however used by hypothetical future residents, that  
9 presented an unacceptable risk.

10 How could you have hypothetical residents or  
11 real residents if you have affected ICs?

12 TOM PAULING: Well, you wouldn't. But if  
13 the institutional controls fail, if development  
14 encroaches, it's just a way of looking at a worst case  
15 scenario, and making that calculation. We hope that  
16 doesn't happen and --

17 DON PRICE: We're planning for the  
18 possibility of institutional controls not to be nailed  
19 down to solid to allow for failure.

20 TOM PAULING: Not planning for it, but  
21 we're calculating the potential effect that that might  
22 have.

23 RAY PLIENESS: It's actually the basis for  
24 establishment for institutional controls, is that exact  
25 statement; that we do have an unacceptable risk. If

1 somebody was to move there and utilize that water as  
2 their source of drinking water for thirty years day in  
3 and day out.

4 So the basis of the institutional control is to  
5 eliminate that, and the assumption is not that it won't  
6 work. It's that, if it did, it would unacceptable. Just  
7 why did we establish it in the first place. Otherwise,  
8 we wouldn't be responsible.

9 DON PRICE: Well, as a personal opinion,  
10 that comment seemed to weaken your arguments when you say  
11 we're allowing for a hypothetical incident that happened  
12 in a nontechnical sense because of ICs. But you're not  
13 allowing for any other hypothetical things that happen.

14 My last comment is on institutional control  
15 location maps, and in the handout, the last page, and I  
16 believe that's probably the one right there. Right  
17 there.

18 Of conspicuous note, to me, is the green shaded  
19 area called the area of groundwater impact. And it  
20 touches Lake 36. And I believe people fish in Lake 36.

21 TOM PAULING: Lake 36 is surface water,  
22 and this depicts our best estimate, based on the wells  
23 that we have in this area, as to how far north that  
24 groundwater contour might go, which is the drinking water  
25 contour for nitrate. So it's an estimate as --

1 DON PRICE: So it's a horizontal. But I  
2 believe then the question is the vertical.

3 TOM PAULING: Well, we've addressed the  
4 vertical extent to the RI and some of these other  
5 documents that we've developed over the years and the  
6 conceptual model.

7 DON PRICE: The question very simply is:  
8 It appears from that drawing the water in the groundwater  
9 is coming right up to the edge of the surface water.

10 TOM PAULING: The surface is what? How  
11 deep is that?

12 REBECCA CATO: The well water.

13 TOM PAULING: The --

14 REBECCA CATO: About fifty feet deep, and  
15 the lake is not fifty feet deep.

16 TOM PAULING: Did you get that?

17 DON PRICE: No.

18 REBECCA CATO: The well water is  
19 approximately -- the average is about fifty feet below  
20 the ground surface into the -- in the bedrock, and the  
21 lake does not extend into bedrock.

22 Unfortunately, it just looks like the nitrate  
23 goes into the lake.

24 DON PRICE: So they don't touch --

25 REBECCA CATO: They do not.

1 DON PRICE: -- but it goes under perhaps?

2 REBECCA CATO: Perhaps.

3 DON PRICE: For now.

4 Thank you.

5 WENDEE RYAN: All right.

6 Next person.

7 PAMELA THOMPSON: Anyone else have a  
8 comment they'd like to share verbally?

9 WENDEE RYAN: If you could, please, state  
10 your name when you have your comment. And ask you to  
11 speak up.

12 KAY DREY: Go up here?

13 WENDEE RYAN: You can, if you like, or you  
14 can stay where you're at.

15 I ask that you please speak loudly and clearly  
16 so that our Court Reporter can capture your comments.

17 KAY DREY: My name is Kay Drey. I live in  
18 University City.

19 No doubt the U. S. Department of Energy's  
20 primary contractor for the Weldon Spring Site Remediation  
21 would like to finish packing up and closing down the last  
22 traces of the Weldon Spring assignment.

23 But those of us who live nearby or downstream -  
24 - I don't know where my glasses went -- live nearby or  
25 downstream and downwind do not have the option of walking

1 away from the Weldon Spring environment. We will be  
2 breathing its air and drinking its water for the rest of  
3 our lives. That's why tonight's meeting is so important.

4 If the Department of Energy is allowed to leave  
5 radioactive uranium and thorium and their counterparts in  
6 the terrain that lies beneath this site, the groundwater  
7 that flows to the Missouri and Mississippi Rivers  
8 upstream from St. Louis will continue to pick up and  
9 disperse these toxins into our biosphere far into the  
10 future, billions of years, as anyone here can imagine.  
11 I wish I knew how many times I have said that or written  
12 that over the past twenty-five years.

13 We have been hearing recently about the  
14 hazardous effects on our U.S. troops of effects of  
15 uranium munitions used during the two Gulf wars. To  
16 quote from a speech last month by the former director of  
17 Army's depleted uranium project, uranium dust is so fine  
18 that it acts like a gas, seeping into the tiny holes of  
19 protective masks. Quote, "It contaminates the air, water  
20 and soil for all eternity", end quote.

21 If, as predicted, uranium remains radioactive  
22 for billion of years, could be spread by sedimentary  
23 material and plants in the springs, how then would the  
24 levels of uranium meet federal and state standards in the  
25 timeframe predicted by the DOE; namely from four to eight

1 years.

2 Is it reasonable to expect that uranium will  
3 remain attached in perpetuity to the surface vegetation  
4 growing in and along rapidly flowing spring water? Or  
5 would some of the uranium not be released in plumes or  
6 clumps to be transported in both dissolved and  
7 particulate forms? Could the organic materials to which  
8 the uranium is absorbed cause the dissolution of the  
9 uranium, thus accelerating the migration rate of the  
10 uranium.

11 The proposed plan clearly states that no  
12 reduction of toxicity, mobility or volume through  
13 treatment would be accomplished because the contaminated  
14 groundwater would not be treated. Then, as downstream  
15 water consumers, we can only urge you to be as forthright  
16 as possible in explaining that our generation, those  
17 alive today, and those in the future will continue to be  
18 exposed to the Weldon Spring uranium, thorium, radium,  
19 radon, plutonium, titanium, protactinium and so forth.

20 I am submitting some documents, a bunch of my  
21 old letters, which have questions about groundwater, but  
22 also some documents that talk about particularly how  
23 hazardous the materials are that we have here at Weldon  
24 Spring. These materials will be exposed in concentration  
25 with impacts on health. They cannot be accurately

1 monitored or predicted, and most probably cannot be  
2 naturally attenuated to levels assessed by future  
3 scientists and physicians to be safe or even permissible.

4 As I understand it, natural attenuation is a  
5 process usually relied upon for volatile organic chemical  
6 components, for substances that break down into various  
7 degradation products, a progression that will take  
8 virtually forever for some of the radioactive materials  
9 at Weldon Spring. Thorium 230 has a half life of 75,000  
10 years. Uranium 238, a half life of 4.5 billion years,  
11 and Thorium 232, a half life of 14.1 billion years.

12 Are you really asking us to wait forever while  
13 these materials continue giving off radioactive particles  
14 and rays? The uranium and thorium to, quote, naturally  
15 attenuate? Are your monitoring tools and weld seams  
16 going to last that long? And if the concentration levels  
17 of contaminants remain greater than the current  
18 established standards, are we not entitled to a  
19 contingency plan more realistic and complete than merely  
20 additional fish sampling at Lake 34 in Busch Conservation  
21 Area, some additional monitoring?

22 The proposed plan is to wait for the  
23 radioactive waste to dilute and disperse themselves  
24 somehow at some point in the unknown future. I believe  
25 that monitored natural attenuation, walking away from the

1 contaminated ground water in this heterogenous, complex  
2 hydrogeology is not a proposed action but is instead, I  
3 believe, a proposed inaction.

4 DAN McKEEL: Hello. I'm Dan McKeel. I'm  
5 an stakeholder, M.D., physician and an pathologist. And  
6 my comments are as follows:

7 I think this document, the proposed plan for  
8 groundwater, is similar to the long-term stewardship  
9 document draft that was offered us last August. It's  
10 very brief.

11 I'm particularly concerned about the sections  
12 on Pages 14 and 15 dealing with triggers and contingency  
13 plans. And it seems to me, although I know that there's  
14 some of those mentioned in the evaluation document, but  
15 here's some language that really bothers me in this kind  
16 of report that we're supposed to take some action and  
17 make a comment.

18 Page 15, quote, "Within the plumes, the trigger  
19 concentration will be representative of historical  
20 highs." I don't know what that means. "B) At the  
21 springs, the trigger concentrations will consider health-  
22 based values and historical trends," end quote.

23 This type of wording is so vague that no  
24 regulatory or scientific meaning flows from it. What are  
25 health-based values, for instance? How will historical



1        highs actually be used to set triggers?

2                The second comment is that, in this process,  
3        for the general public, there's really been no  
4        opportunity thus far for us to have any input into the  
5        remediation alternatives. And as a result of that, I  
6        don't think that the alternatives offered are the ones  
7        that we really should be considering.

8                I favor, I would call it a fourth alternative,  
9        and propose this. And that is that we have active  
10       treatment based on the latest technology. And I would  
11       like to use the groundwater remediation effort at the  
12       Fort Lewis Washington Super Fund Site as a model.

13               There they have a TCE plume problem that's  
14       migrated. They have the same options available as we do  
15       in terms of traditional methods that have been referred  
16       to, in-place treatment of the TCE neutralization. They  
17       came to a completely different decision. That they said  
18       let's use multiple remediation technology by  
19       over-mediation, as well as the traditional methods.

20               And they predict that they can leave the  
21       groundwater in unrestricted use within forty years.  
22       Here, our Preferred Alternative 3 will take a hundred  
23       years to comply with the applicable statutes.

24               One thing that's not mentioned, and I would  
25       like somebody to comment, to respond to it at the end of

1 this, is we haven't said anything about how much cost has  
2 to do with the alternative chosen. And reading between  
3 the lines and knowing what is happening to Super Fund  
4 funding, I want somebody to address whether there was an  
5 active consideration that it would cost too much to apply  
6 these remediations, active remediation strategies, and  
7 that's one reason that they were chosen.

8 I want to mention, it's been brought up several  
9 times by the Conservation Department and Natural  
10 Resources; that they want to have vertical plume maps for  
11 specifics. I'd just like to mention that I had  
12 requested two years ago from four agencies, DNR,  
13 St. Charles County, Department of Energy, USGS,  
14 specifically that; a 3-D uranium plume map.

15 I was told by a multiple of those agencies that  
16 it was coming, it was in the works, it could be done, but  
17 it would take time. So I've been patient two years. I  
18 don't see any 3-D plume maps, and people are  
19 acknowledging now that that's really necessary to say  
20 what we're going to do with groundwater.

21 I have a comment about the interceptor trench  
22 design.

23 WENDEE RYAN: You need to wrap up your  
24 comments, and we'll get to you again after the  
25 additional --

1 DAN McKEEL: If you want to cut me off,  
2 just say so, and I'll quit.

3 WENDEE RYAN: You want to respond his  
4 questions?

5 DAN McKEEL: I really didn't -- I don't  
6 want any of my time taken up with responses. I would  
7 rather finish my comments or be cut off.

8 WENDEE RYAN: Well, the cutoff's right  
9 now. Thank you.

10 Is there someone else who would like to speak?

11 CLARISSA EHEON: My name is Clarissa  
12 Eheon. I'm from Hematite. I'm here on behalf of the  
13 Citizens with Weldon Spring and the American public in  
14 general. That's E-h-e-o-n, Clarissa.

15 I want to give testimony and a warning to the  
16 general public about the severity of what's going on  
17 here.

18 As I said, I'm from the Hematite area whose  
19 drinking water was contaminated by one of the oldest  
20 nuclear fuel fabrication plants in the United States. My  
21 family and I were drinking over a hundred and sixty  
22 carcinogenic chemicals as a result of the nuclear  
23 operations in Hematite. The water contamination was  
24 discovered only after my neighbor out of fear requested  
25 her water to be tested when a home near the plant was

1 found to be contaminated.

2 The workers at the facility were also exposed  
3 to TCE and other volatile organic chemicals used to  
4 degrease, clean the shop floors and equipment. The plant  
5 was also left with residual radioactive from the Cold  
6 War. Sorry, I'm a little nervous.

7 With all the technology, knowing past  
8 practices, all the highly-educated physicists,  
9 geologists, chemists, experts hired by this industry to  
10 monitor the hydrology flow, geology structure of the  
11 areas, specifically being in a flood plain, I'm not  
12 convinced this is a surprise to the responsible parties,  
13 and if it is, why is that a surprise?

14 Today I have with me a jar of Hematite country  
15 tea prepared especially for you all; DOE, DNR, anyone  
16 responsible for what's happening in Hematite and here at  
17 Weldon Spring. It's only fair that you have a glass that  
18 you helped to brew, the real brisk one. My family and I  
19 have consumed many glasses over the years, and today I'm  
20 dealing with many health problems that were diagnosed all  
21 in the last year because of, I believe, the chemicals  
22 that we were consuming.

23 Many skin rashes, burns that would appear on my  
24 neck, chest and scalp, irritable bowel syndrome, acid  
25 reflux disease, having to take glucofauge to stop my

1 pancreas from overproducing insulin. I also had four  
2 polyps removed, all at the ripe age of thirty-three.

3 I have never had allergies until I moved there.  
4 I'm extremely upset at this juggernaut in Hematite and  
5 all around the State of Missouri, which will have to be  
6 changed to Misery if this mess is not addressed and  
7 corrected now. Time is not an ally.

8 The rivers, lakes and creeks here in Missouri  
9 have become personal industrial trash cans at the  
10 public's expense of health and safety, which we all know  
11 has been sacrificed. Just like the products that were  
12 manufactured here in our state, we will not go away.

13 We're here to hold you responsible for being  
14 naughty neighbors, employers and officials for allowing  
15 the debilitation of our neighborhoods, parks and water  
16 supplies and air.

17 The weapons workers, your employees, our  
18 fathers, mothers, husbands, wives and citizens, are now  
19 the fighting soldiers, not for the Cold War but for the  
20 hot war against all of us, even your children.

21 We must have sound remedies to this pollution.  
22 Some are just fighting for their last breath, and we also  
23 need aggressive action. Please do not let them -- do not  
24 sit by and let this go on. They're trying to walk away.

25 Also, my son is twelve years old. He's a

1 little shy. He has a comment. I'd like to read that for  
2 him.

3 It says, "Hello. My name is Collier. I'm  
4 from Festus, Missouri. My drinking water was  
5 contaminated by a nuclear plant at Hematite, Missouri.  
6 Me and my family were drinking poison from this bad  
7 business. These poisons will remain in my environment  
8 and my future for many, many years. I think the people  
9 responsible should be spanked and have to write  
10 4.5 billion sentences saying I will not pollute Missouri  
11 no more, one sentence for each year their products will  
12 remain on this earth.

13 Please do not rob me of my future. You should  
14 also be punished for dumping poisons in our state parks.  
15 Thank you."

16 AUDIENCE: (Clapping.)

17 NANCY ADAMS: My name is Nancy Adams. My  
18 dad worked at Mallinckrodt Chemical Works and here at  
19 Weldon Spring for a while. He decided to go back there  
20 because he thought it was so terrible here, the stuff he  
21 was working with. He didn't realize how bad.

22 My dad died a terrible death. Suffering from  
23 lung disease and bladder cancer for that last ten years  
24 of his life. Very bad. I don't want to get into all of  
25 that.

1 I myself am a cancer survivor, and I don't want  
2 to drink any amount of uranium, whether it's  
3 20 picocuries or a 100 picocuries. I don't want to drink  
4 1 picocurie of uranium. Because we know now that uranium  
5 causes all kinds of disease.

6 Sixty years ago when they started this  
7 Mallinckrodt plant, the men were told that they were  
8 working with safe -- they were safe, that the  
9 contamination amounts were within acceptable amounts.  
10 I'm hearing people talk about ARARs. That is based on  
11 current scientific, medical and technical knowledge.

12 What's going to happen in sixty years when they  
13 find out that one picocurie of uranium can do terrible  
14 things, just as they did with the stuff that my dad  
15 worked with sixty years ago.

16 So I'm saying take the high road and work on  
17 this and get rid of this stuff. Don't let it stay in the  
18 water, the groundwater. Do whatever you have to do, even  
19 if you have to fence off all of Busch Conservation area,  
20 do it. Tell people, put signs up. Be honest with us.

21 Thank you.

22 WENDEE RYAN: Would you spell your last  
23 name?

24 NANCY ADAMS: A-d-a-m-s.

25 MIKE GARVEY: My name is Mike Garvey. I'm

1 a local orthodontist. I have been involved in the Weldon  
2 Spring Site for many years. I originally got involved as  
3 one of the citizens as a resident of St. Charles County.

4 The first thing I'd like to do is show  
5 appreciation for the excellent work that the Department  
6 of Energy has done, and the subcontractors and also the  
7 Missouri Department of Natural Resources' involvement  
8 over the years. I think we've greatly improved local  
9 conditions, and the public health of the residents.

10 I think we got in early. I think part of the  
11 reason we got into the funding earlier is because of the  
12 citizens being vocal. I think the Department of Energy  
13 really didn't know how to handle that early on. But I  
14 have seen continual improvement on their part on this  
15 thing here.

16 But the St. Charles County residents are also  
17 grateful but concerned about the long-term potential if  
18 some unexpected loss of safety exposed the cell. And the  
19 contaminated groundwater left in place and also surface  
20 water after the act of remediation.

21 Finally, my biggest comment would be, and I  
22 know this has been considered, the first thing is it  
23 seems as though the discussion of course topography, I'm  
24 totally stumped because -- and amazed because it seems  
25 like this last report has been one that's been the most



1 honest regarding the hydrologic and geological conditions  
2 under the site. We're seeing now things like highly  
3 fractured limestone -- these are all quotes, solution  
4 voids, complex hydrogeology, large fractures, rapid  
5 groundwater transport.

6 So my point has always been that should the  
7 disposal cell be placed in an area where there's already  
8 contaminated groundwater, how can you then identify if  
9 it's effective even in the future?

10 And, you know, perhaps maybe the site should  
11 have been somewhere different, but it was done here. But  
12 still this leaves us with a difficult solution in that we  
13 have to identify whether, in fact, the disposal cell is  
14 continuing to hold the contamination in it. As Kay  
15 mentioned, thousands and millions of years.

16 So it's under this heterogeneous, highly  
17 fractured groundwater medium of totally connected voids  
18 which may hold contamination. Again, we're starting to  
19 hear these things.

20 So some of the things I'd like -- you know,  
21 like I'd like to know what the screening intervals of the  
22 detection wells are. Based upon some of the -- it seems  
23 that this discussion, in honesty, regarding rapid  
24 transport, the County has actually been inundated with  
25 chemicals that have migrated off site for many years into

1 Lakes 34, 35 and 36, Schote Creek, Dardenne Creek, and  
2 groundwater moved to Lake St. Louis, and showing up in  
3 various places, especially with a lack of delineation and  
4 vertical extent of contaminations and migrations and  
5 plumes, which would fall out.

6 It seems the institutional controls location  
7 map, Page 14, seems artificially drawn to only include  
8 the chemical site at two springs, and they may be too  
9 small.

10 I know it's somewhere, but how was it  
11 determined that Twin Island Lake was not degraded by the  
12 DOE sites, the well there.

13 And I'd like to know what are the results of  
14 the sampling of the other perennial springs seen in  
15 Figure 3 on Page 6? And perhaps if the groundwater  
16 flowed from the plant site to the north as this  
17 indicates, then some of these springs might be able to  
18 look at the background levels.

19 WENDEE RYAN: You have to wrap up your  
20 comments.

21 MIKE GARVEY: I'd like to know where one  
22 could find the Missouri Department of Health's private  
23 drinking well reports.

24 I'd like to know whether signage will be placed  
25 at Burgermeister Spring regarding being told not to drink

1 the water.

2 I know the Department of Conservation is  
3 worried about the concern regarding whether this  
4 contamination of Lakes 34, 35 and 36, but I do strongly  
5 feel that -- and also Fem-Osage slough north and south,  
6 that they should make it catch-and-release only. That's  
7 only logical.

8 But my biggest comment is regarding the  
9 feasibility of looking at, now that the points are made  
10 that the groundwater flows in the upper surface areas to  
11 the Burgermeister Spring, is let's look at the  
12 possibility of using that site to consider the  
13 feasibility of long-term remediation at that location,  
14 using both active and passive means.

15 The groundwater at Burgermeister Spring has for  
16 too long inundated St. Charles County.

17 Thank you.

18 WENDEE RYAN: Would you spell your last  
19 name?

20 MIKE GARVEY: G-a-r-v-e-y.

21 VIRGINIA DOWDEN: My name is Virginia  
22 Dowden, and I live in the New Melle area. And I am just  
23 commenting on the surveillance plan, not on past history.

24 I believe the proposed remedial action plan is  
25 a good starting point, and we'll probably need to fine

1 tune as we solve the input of the various agencies and  
2 citizens. I have a few questions on things I would like  
3 to happen

4 All monitoring wells shown on the map that will  
5 be available to the citizens, as well as reports be  
6 available on the monitoring of the wells and remedial  
7 actions if necessary, based on the charts.

8 Is the remedial action plan written in stone,  
9 or is it a living document that can be amended if  
10 contingencies arise by reconvening various agencies to  
11 deal with problems?

12 We could talk for sixteen years about what  
13 we're going to do, but we need a starting point. And I  
14 think this document is a starting point. And I'm sure  
15 comments will be taken into consideration by the  
16 Department of Energy and the EPA.

17 I hope that funding will be available for a  
18 hundred years or more. I'm not sure this plan is going  
19 to be around in a billion years at the rate we're going.  
20 As long as it is deemed necessary, I hope the funding  
21 will be there, and that if there is something that really  
22 comes up that is a terrible problem that everybody will  
23 be reconvened once again, and that this site will not  
24 just be an empty site that the surveillance comes from  
25 Colorado or some other place like that.

1 But it's a good starting point, and we have to  
2 start somewhere because we've talked and talked and  
3 talked.

4 WENDEE RYAN: Would you spell your name?

5 VIRGINIA DOWDEN: Dowden, D-o-w-d-e-n.  
6 Virginia, just like the state.

7 RON GRAEF: First I'd like to state I  
8 always thought all the figures out here -- I've always  
9 found them to be polite, thorough and very detailed,  
10 especially those back here.

11 And I guess, as an ordinary citizen, I've heard  
12 lots about Weldon Spring for other reasons, and I have a  
13 very difficult time comprehending all the complicated  
14 details and that. I guess my basic question is: Has  
15 there been any other studies done by independents other  
16 than what I call taxpayer supporter studies, state and  
17 federal and the EPA, et cetera?

18 I based that on the studies done, especially  
19 one done in 1999, done by Oak Ridge Health Studies, and  
20 the study found that the results of the study done by the  
21 DOE were six times off.

22 And I just wonder: Has there been any other  
23 completely independent studies done? Somebody that's  
24 evaluated this that's completely independent of  
25 taxpayer's support, politically involved? People of St.

1 Charles County who want St. Charles County to be very  
2 attractive.

3 PAMELA THOMPSON: I can answer that. To  
4 the best of my knowledge, no, it has not been.

5 WENDEE RYAN: Can you please spell your  
6 last name?

7 RON GRAEF: G-r-a-e-f.

8 DENISE BROCK: Hi. My name is Denise  
9 Brock. That's B-r-o-c-k. And I am the Director of the  
10 United Nuclear Weapons Workers in the St. Louis region.

11 Several of my board members are here this  
12 evening. And I am, by no means, a toxicologist, nor do I  
13 deal with compensation claims for the thousands of locals  
14 that have been affected by this radiation exposure.

15 I do have a few questions I'd like to ask  
16 tonight. First of all, I'd like to know if I could get a  
17 detailed report of the groundwater remediation. I mean  
18 the actual ICO treatment study, and would I be able to  
19 get the results to that.

20 RAY PLIENESS: Yes.

21 DENISE BROCK: Yes?

22 RAY PLIENESS: Yes, absolutely.

23 DENISE BROCK: And will the report  
24 actually tell me or give me the results of the ICO, the  
25 groundwater conditions; is that correct?

1 PAMELA THOMPSON: It should.

2 DENISE BROCK: That will actually give me  
3 the results, the ICO?

4 PAMELA THOMPSON: The problem is it's  
5 proprietary to the vendor. But we have a summary of  
6 those -- we have a summary of the results of the chemical  
7 oxidation that we could release that helped us base our  
8 decision on the effectiveness of chemical oxidation.

9 You can request the actual report done by the  
10 subcontractor who developed the chemical oxidation and,  
11 implemented it for us. You would have to submit it to  
12 them because they have marked it proprietary because of  
13 some of their activities, their chemical compounds and  
14 how they are used, how they injected them, is proprietary  
15 to their business.

16 And if you wanted their actual report, ask them  
17 to give you that, or we can give you the summary that we  
18 have that we based the decision on.

19 DENISE BROCK: To get the actual report, I  
20 would actually need to approach you, and you, in turn,  
21 would approach that vendor?

22 PAMELA THOMPSON: That is true, yeah.  
23 We'd have to approach her somehow.

24 DENISE BROCK: I wouldn't necessarily be  
25 needing a form for a request or anything like that. I

1 can just -- I have not had real good results with formal  
2 requests from the Department of Energy.

3 I'd like to also have -- what is the degree of  
4 contamination? I mean is it the aquifer? Excuse me if I  
5 missed something in there because I didn't understand it.  
6 Is it just the aquifer? Is it the contamination or the  
7 continuation of the contamination south of the raffinate  
8 (sic) pits, or is it the spring? And I'm not sure how to  
9 say that. Is it -- it sounds like a bad beer I heard  
10 somebody say.

11 I mean is it all of those that we're looking at  
12 here? What is the degree of contamination?

13 REBECCA CATO: Well, the groundwater at  
14 the chemical plant that's shown on the figures that shows  
15 the plumes, in the shallow bedrock, the upper bedrock is  
16 contaminated.

17 DENISE BROCK: Okay.

18 REBECCA CATO: But that groundwater does  
19 discharge through some rapid transfer features, and does  
20 express itself at Burgermeister Spring, and then there  
21 are two springs in the southeast drainage.

22 DENISE BROCK: So it's kind of an all-over  
23 situation then?

24 REBECCA CATO: Well, this plume, and then  
25 there's some rapid smaller features that reach out.



1 DENISE BROCK: I'm curious, and maybe I  
2 didn't understand, are you -- as I understand it, I think  
3 back in November 2002 wasn't there something that stated  
4 where vegetation was actually established there would be  
5 need for groundwater or surface water monitoring.

6 Are you doing groundwater monitoring or surface  
7 water monitoring, or are you continuing to do both? I  
8 mean I understand you're doing groundwater. Are you  
9 going to continue with the surface monitoring as well?

10 TOM PAULING: We have a permit from the  
11 State of Missouri Department of Natural Resources through  
12 their Clean Water Program that we believe once it's  
13 established we will not need to monitor the surface water  
14 at its discharge site.

15 So we're in the process of requesting that be  
16 determined. We will continue with it. If there's a  
17 problem with it, of course, then --

18 DENISE BROCK: If there's a problem. I  
19 guess I don't understand.

20 Are you going to also continue to monitor --

21 REBECCA CATO: The springs we already did.  
22 The springs will be continued. This is already monitored  
23 and also being proposed as a monitoring location in the  
24 future.

25 DENISE BROCK: Then the only other

1 question I had is: I'm a little confused about the cell  
2 and it not working. But I understand that with the cell  
3 that there's actual seepage going into groundwater. In  
4 my mind I'm thinking, my gosh, if something goes in,  
5 where does it come out? Is it passed along? Does that  
6 go into your groundwater or your soil or --

7 PAMELA THOMPSON: When we built up the  
8 cell -- I'll be glad to answer. I need to be sure first  
9 there are no seepage into the cell now. There was water  
10 where we constructed the cell that was in the cell, and  
11 we have a drainage system in the cell that takes that  
12 water out.

13 DENISE BROCK: Okay. Thank you very much.

14 DEE DEE AUBUCHON: My name is Dee Dee  
15 Aubuchon. That's A-u-b-u-c-h-o-n.

16 I have a question about safety and DOE being  
17 here tonight telling everybody that everything is low  
18 risk and all that. Then what happens when things are not  
19 low risk? You're not allowed to talk? How does that  
20 work? I guess, say, the lake all of a sudden had uranium  
21 water in it, and you were not allowed to tell the public  
22 about it?

23 Why are you able to tell us it's safe, but  
24 you're not able to tell us if there's a problem?

25 PAMELA THOMPSON: Well, Dee Dee, I don't

1 know that I've ever said we're not allowed to let you  
2 know. If we find a result, be it in ground water or in  
3 any surface water monitoring that we have, then as a  
4 health risk level we report it, not only to the State of  
5 Missouri and the Environmental Protection Agency, but to  
6 the Department of Health.

7 So we're not just disallowed telling you if  
8 there's a health risk.

9 Or am I confused about what your question was?

10 RAY PLIENESS: I think actually we  
11 reported today that we are above the unacceptable risk if  
12 somebody put a house here and utilized this water, and  
13 that's why we have institutional controls. So I'm not  
14 quite sure what your point --

15 DEE DEE AUBUCHON: That's a hypothetical.

16 RAY PLIENESS: Well, it's not hyp -- it's  
17 hypothetical because nobody lives there. But a plume is  
18 an unacceptable risk. The contamination that's left here  
19 would be unacceptable if somebody utilized it.

20 So, if your question is, well, what about  
21 somebody using the lake that's presently there, we have  
22 that exact same knowledge and responsibility, but we  
23 would be at the point to let everybody know if we had an  
24 unacceptable risk any place.

25 DEE DEE AUBUCHON: How do you do that

1 without signs?

2 RAY PLIENESS: Well, if there was an  
3 unacceptable risk, you include putting a sign up or  
4 create institutional controls.

5 DEE DEE AUBUCHON: I think the absence of  
6 signs allows people to assume that it's completely safe,  
7 to unrestricted use.

8 RAY PLIENESS: I think it would allow them  
9 to understand that, in accordance with the standards that  
10 are established by EPA, affected -- you mentioned, well,  
11 maybe those standards aren't correct. Unfortunately,  
12 they're the best technological data we have,  
13 toxicological data we have. And within those standards,  
14 they are safe.

15 Can I stand here and say fifty years down the  
16 road they may not change? I cannot. But within the  
17 record books that we have today, the data that we have  
18 today, the scientists that do this work, I would say  
19 they're safe from unrestricted use. That's correct.  
20 Based on the data we have.

21 TOM NELSON: Dee Dee was asking about  
22 signage. Now don't we have a committee working on  
23 preparing the signage?

24 WENDEE RYAN: You have to identify  
25 yourself for the Court Reporter.

1 TOM NELSON: I'm Tom Nelson.

2 PAMELA THOMPSON: We do have a group  
3 that's working with the Department of Energy to get  
4 historical markers at the site to identify to the public  
5 areas of interest, areas that were contaminated, that  
6 have been remediated and tells the history of that  
7 particular area. We've been working with the Department  
8 of Conservation. We've been working with the citizens to  
9 develop that signage. And we are in the process of  
10 getting the final part of that. And it goes back to the  
11 group that will put the signs up.

12 These are not warning signs, Warning: do not  
13 build a house in a recreational area, or Warning: you can  
14 build a house in a recreational area but don't drink the  
15 water out of it. These signs are going to be designed to  
16 tell what is there, what was there, and the story of the  
17 cleanup of this site. So we are developing historical  
18 signs to warn people and to continue to bring people here  
19 to the site to ask these questions.

20 DEE DEE AUBUCHON: Pam, but there's no  
21 warning signs to tell them.

22 PAMELA THOMPSON: That's correct.

23 LOUISE MCKEEL: Along the same line --

24 WENDEE RYAN: Identify yourself for the  
25 Record.

1 LOUISE McKEEL: Yes. My name is Louise  
2 McKeel.

3 Will there be warnings such as uranium or  
4 radiation on any of the signs?

5 PAMELA THOMPSON: Yes, there will be.

6 TOM PAULING: I guess I just, to elaborate  
7 on the question, I don't think you could drink too much  
8 of this water unless you established a residential  
9 presence at Burgermeister and use it as your drinking  
10 water source every day. And at some point, John Vogel  
11 would run you out of there. So it's -- the quantity and  
12 the taste would be of a residential nature.

13 DEE DEE AUBUCHON: What is the cutoff  
14 between residential and recreational?

15 TOM PAULING: Well, our example was that -  
16 - well, maybe Mary could talk to this a bit.

17 MARY PICEL: The way we did the  
18 calculations so that we could see what's reasonable use,  
19 that's recreational. So we say possibly twenty cups of  
20 water a year during the years. Now you could decide for  
21 yourself if that's too little or too much for a  
22 recreational visitor to the area.

23 DEE DEE AUBUCHON: Somebody would have to  
24 look that up.

25 MARY PICEL: Yes.

1           And then when the other end of the range is the  
2 rest of the area which is considered to be the most  
3 conservative, the most -- and those you could possibly do  
4 -- drinking water, two liters a day in twenty years.

5           The assumption that we may get will vary in  
6 the area, for thirty years, standard consumption.

7           So that's the two extreme -- the two ranges  
8 that we use to look at. Somewhere in between there maybe  
9 you can hope to prorate that. But that's how we  
10 calculated the numbers.

11           DEE DEE AUBUCHON: Okay. As far as  
12 information, I'm just not sure everybody that goes there  
13 would know that. That's why I'm worried.

14           MARY PICEL: I think we can inform them of  
15 that.

16           DEE DEE AUBUCHON: Can you talk about the  
17 number of years? I don't have it here, but I can't  
18 remember what you said. But what is the pit area? What  
19 is a thousand and what is the --

20           MARY PICEL: You want to know the numbers?  
21 For example, TCE in our pits we have --

22           AUDIENCE: Can you speak up, please?

23           MARY PICEL: The TCE by the raffinate pits  
24 we have concentrations of the contaminant TCE that will  
25 give you one chance in ten thousand.

1 DEE DEE AUBUCHON: One person --

2 MARY PICEL: Not so much one person in ten  
3 thousand, but your chances of getting the -- your chances  
4 of getting cancer will be increased by one chance in ten  
5 thousand, because all of us that lives in this country  
6 would have -- one in three of us is supposed to develop  
7 cancer in a lifetime. So let's say that's .33. And see  
8 we're adding .00001 to that .33.

9 DEE DEE AUBUCHON: Okay. I'm just  
10 interested in your numbers and then your rationale.

11 MARY PICEL: You're increasing it by a  
12 little amount.

13 DEE DEE AUBUCHON: Well, I understand that  
14 part. But I read something about cancer that says every  
15 little bit --

16 MARY PICEL: Yeah.

17 DEE DEE AUBUCHON: -- increases your  
18 chance.

19 MARY PICEL: Yeah.

20 DEE DEE AUBUCHON: And I think there are  
21 people who probably have cancer from various sources.

22 MARY PICEL: I'm just explaining from the  
23 standpoint of my calculations and what the EPA gives us  
24 as guidelines to do that calculation.

25 WENDEE RYAN: Identify yourself.



1 CALVIN DRESSER: Calvin Dresser,  
2 D-r-e-s-s-e-r.

3 Could you show in your report the extent of the  
4 public lands that are surrounding this? I don't remember  
5 seeing it anywhere in these reports. You do show the  
6 extent of the DOE lands.

7 RAY PLIENESS: That's going to have to be  
8 a written response.

9 WENDEE RYAN: Anybody else have something?

10 MIKE LANG: Mike Lang, L-a-n-g.

11 At the present time, are you saying that are  
12 traces of uranium in Lake 34, 35 and 33?

13 PAMELA THOMPSON: (Shaking head.)

14 REBECCA CATO: No.

15 RAY PLIENESS: When's the last time it was  
16 tested for it?

17 REBECCA CATO: When's the last time it was  
18 tested?

19 KAY DREY: The surface water? The water  
20 or the sediment. What happened in the contaminated  
21 sediment? Did you take it out?

22 MIKE LANG: The spring had water in it.  
23 The spring was flowing into these lakes. Wouldn't the  
24 lake have it in it?

25 REBECCA CATO: Lake 34 and 35

1 characterization showed nothing above background levels  
2 in the sediment.

3 And, Tom, you can address Lake 36; can't you?

4 TOM PAULING: Well, yes. Lake 36 had  
5 slightly elevated levels. The Conservation Department  
6 drained that lake and removed sediments six years ago or  
7 so.

8 MIKE LANG: And how often are they tested  
9 for it?

10 TOM PAULING: For what?

11 MIKE LANG: Are the lakes tested for  
12 any --

13 TOM PAULING: Well, that's what we're not  
14 quite sure on. I'd have to see our lake samples.  
15 They're still doing samples.

16 MIKE LANG: Well, I mean as a sportsman  
17 that would like to use these areas out here, if there is  
18 any trace of uranium in any of the lakes, like the lady  
19 said earlier, why would not a sign be put up to let the  
20 public know that's coming in to use it and make it their  
21 choice if they want to fish in the lake that has uranium  
22 traces in it or not?

23 PAMELA THOMPSON: What's your comment?

24 LOUISE McKEEL: Along the lines, I believe  
25 you said TCE, how does that --

1 MARY PICEL: Excuse me. Go ahead.

2 LOUISE McKEEL: And I'm asking you about  
3 regular baseline.

4 MARY PICEL: We have four leading  
5 contaminants in the soil, but uranium is the most  
6 vulnerable one. And we have sampled all four in the  
7 past, and through the years have determined that only  
8 uranium is in the groundwater. And there are two wells  
9 in particular that have rate of concentration that are  
10 about 60 picocuries per liter, 20 being our MCL standard.  
11 We're about three times over the standard in two of our  
12 wells.

13 And there are also uranium concentrations in a  
14 few other wells, but they're not very high. They don't  
15 exceed that point.

16 LOUISE McKEEL: And all these reports are  
17 available to the public?

18 REBECCA CATO: Right. And, in fact, we  
19 summarize that in the proposed plan.

20 MIKE GARVEY: If I might, it goes along  
21 with the same discussion and background. It seems like  
22 background is a very illusive communique.

23 Is background for uranium 10?

24 MARY PICEL: I think it's 1.

25 MIKE GARVEY: It's 1.

1 REBECCA CATO: Might be 2.

2 MIKE GARVEY: Now wouldn't it make sense  
3 since the plume of surface water contamination from  
4 Burgermeister Spring flows directly into Lake, you know,  
5 34, for one to expect that uranium inundates Lake 34?  
6 Yes or no.

7 REBECCA CATO: The sample has indicated  
8 that you cannot distinguish the levels in Lake 34 from  
9 background levels from the lake.

10 MIKE GARVEY: That's not the question that  
11 I asked.

12 MARY PICEL: Would you ask it again,  
13 please?

14 MIKE GARVEY: Okay. Let me not ask that  
15 question.

16 Let me ask another question.

17 MARY PICEL: You can ask it. I just  
18 didn't hear the whole question.

19 MIKE GARVEY: Would it not be logical to  
20 assume that uranium concentration is higher because the  
21 surface water flow from Burgermeister Spring, which  
22 averages from ten to a hundred picocuries per liter or  
23 one to a hundred, flows directly into it? Yes or no.

24 REBECCA CATO: Okay. Burgermeister Spring  
25 does discharge to Lake 34.

1 MIKE GARVEY: Right.

2 REBECCA CATO: Another lake was selected  
3 to establish --

4 MIKE GARVEY: Didn't you --

5 REBECCA CATO: -- what --

6 MIKE GARVEY: You did not answer my  
7 question.

8 REBECCA CATO: Yes, I am answering your  
9 question.

10 You're trying to compare it to background  
11 levels. And we have taken and we have established what  
12 background concentrations would be in the surface water  
13 in this area. And that's how you can compare other water  
14 bodies to it to see if you have impacted it. And you  
15 can't tell the difference between Lake 34 and the  
16 background location.

17 So I would say, no, that uranium has not  
18 impacted Lake 34.

19 KAY DREY: How can it not be in the  
20 sediment, though?

21 MIKE GARVEY: Let me say one other thing  
22 to try and delineate the point that I'm trying to make.

23 Have you looked at all of the water of Busch  
24 Wildlife Area to see if, in fact, there's a plume, albeit  
25 below background, of contamination of uranium within the

1 waters? That's the point I was trying to make about the  
2 springs that are shown on the map. Your spring,  
3 Burgermeister Spring, is showing a higher level of  
4 uranium.

5 But to look at the local background, you should  
6 not look at what USGS determined in Darst Bottom.

7 REBECCA CATO: That's not what we've done.  
8 So I think we need to take your comment and answer it --  
9 I believe you have a lot of questions in there, and we'll  
10 have to provide you with a written response.

11 RAY PLIENESS: It's nine o'clock, and I  
12 think probably one or two more questions or comments.  
13 And then we're going to Procedure 6.

14 If somebody hasn't commented yet.

15 RICK HAMPEL: I'm Rick Hampel,  
16 H-a-m-p-e-l.

17 One of the things, there's been a lot of  
18 discussion about risks. People have to understand that  
19 there's risks in everything you do. Being alive means  
20 that there's risks. For instance, radiation in your  
21 homes, standing outside you get radiation there. You get  
22 in your car, you're taking a risk right there.

23 When you talk about risks, you have to  
24 understand that there's risks in everything. What I'm  
25 hearing again tonight is people want zero risk. There's

1 no such thing in life as zero risk. You just need to  
2 understand that as you come up with your comments.  
3 Because there's no way anything can be done at this site  
4 that includes zero risk. Okay.

5           There were technical experts who looked at a  
6 number of alternatives. What you have to understand,  
7 that's their job. They understand how to look at things.  
8 You could possibly have an independent study to look at  
9 the same data they looked and see if they come to the  
10 same conclusions. That's good a point.

11           But if you accept the data, as collected,  
12 observed, and you can be sure it was accurate and  
13 precise. Going from there, we said it's not technically  
14 feasible to do treatment at this site. And that  
15 treatment feasibility not only was economical because  
16 that was one component of it. I think a major component  
17 of it was it was not technically feasible. You would get  
18 no benefit over the course of time by running those  
19 versus monitored natural attenuation with very specific  
20 enhanced monitoring. That's part of the monitoring that  
21 you've done with attenuation.

22           So I just -- I think we need a little bit of a  
23 balanced approach here as far as the risk at this site.

24           And another thing, I would encourage everyone  
25 to get a hold of some of the background documents and the

1 studies, et cetera, and read them for yourself. You  
2 don't have to be technically minded to absorb at least  
3 eighty percent of it. You will understand what has been  
4 done and make better decisions and comments on what's  
5 going on.

6 Thank you.

7 RAY PLIENESS: Okay. We'll take one more  
8 question.

9 DENISE BROCK: I've already commented.

10 RAY PLIENESS: That's okey. Nobody else  
11 stood up, so you're on.

12 DENISE BROCK: I have another question.  
13 It has to do with background.

14 I guess maybe I don't understand that either.  
15 Years ago when the TNT/DNT plant was here, was there ever  
16 background monitoring done prior to that? I mean what is  
17 background based on? Is it based on a mixture of  
18 contaminants that has arrived here, or is prior to the  
19 TNT/DNT plant?

20 MARY PICEL: Typically when you come to a  
21 site, of course, it's too late to get background. It's  
22 already been contaminated.

23 So what we do is we go to a different area  
24 that's got similar characteristics and take samples from  
25 that area. That's our background.



1 DENISE BROCK: This whole area is already  
2 contaminated before any background levels were ever  
3 charted.

4 MARY PICEL: And for TNT and DNT, they're  
5 man-made organics so there shouldn't be any background.  
6 These should be zero.

7 DENISE BROCK: And I understand that the  
8 why the DOE -- that were definite remediation problems as  
9 it was let go. And I was just curious, too, if that, in  
10 fact, had anything to do with your background prior to?  
11 Is that after it's done?

12 MARY PICEL: We are comfortable and  
13 confident with our collection background.

14 DENISE BROCK: Thank you.

15 RAY PLIENESS: Last comment. I'll flip.  
16 We have three hands. So, Ben, I don't think you  
17 commented yet. You have the last comment.

18 BEN MOORE: I'm going to be a private  
19 citizen here.

20 It's come to my attention recently in looking  
21 through your website at background documents that a  
22 number of documents that were originally listed as a part  
23 of that database have been removed, and apparently aren't  
24 available through the website.

25 And that may or may not apply to some of the

1 documents that are pertinent, and you very possibly can.  
2 But I didn't look through to see if it did.

3 Several meetings back the DOE made a commitment  
4 to a very thorough electronic database of pertinent site  
5 documents, and I would encourage you to follow through on  
6 that.

7 RAY PLIENESS: I think I will address  
8 that. We not only made that commitment, we followed  
9 through with that commitment so thoroughly that we  
10 actually put a few documents that had proprietary  
11 information on them, such as on-track proposals, and  
12 those were the documents that have been taken off. I  
13 don't think you'll find any documents about any technical  
14 data relative to this issue that was taken off.

15 If you find any that are not proprietary that  
16 you think were taken off, you let me know. But we were  
17 so zealous in getting the four hundred and  
18 ninety-seven --

19 PAMELA THOMPSON: Seven hundred and  
20 ninety-five.

21 RAY PLIENESS: How many was it?

22 PAMELA THOMPSON: Seven hundred and  
23 ninety-five.

24 RAY PLIENESS: Seven hundred and  
25 ninety-five, yes. They got the documents on and

1 available to everybody as we committed as we didn't  
2 recognize that there were some that were proprietary.

3 AUDIENCE: I'd like to say that just a few  
4 days we asked for a document related to risk evaluations,  
5 and we got a call from Pam asking why do you need that  
6 document, you should have it.

7 So, at least some of the technical documents  
8 that were released by the project are not on the website  
9 and are not listed on the website. I don't have anything  
10 else.

11 NANCY ADAMS: Could you give us an e-mail  
12 address to get to you? Because I found the same thing.

13 RAY PLIENESS: That's a really good  
14 question. And I don't have it.

15 PAMELA THOMPSON: I have the website  
16 address.

17 RAY PLIENESS: Oh. Actually it's the --

18 PAMELA THOMPSON: It's --  
19 weldoncomments@gjo.doe.gov.

20 NANCY ADAMS: weldoncomments --

21 RAY PLIENESS: It's on Page 2 of your  
22 proposed plan provides that website.

23 AUDIENCE: Are these documents stored at a  
24 local open library?

25 RAY PLIENESS: Yeah, they're also in the

1 library.

2 AUDIENCE: Which library?

3 RAY PLIENESS: Most of them. Which?

4 PAMELA THOMPSON: The documents that are  
5 either pertinent to the administrative record index is at  
6 the St. Charles County Document Library, which is  
7 Middendorf-Kredell. They have selected copies of those  
8 documents in their administrative records.

9 Any documents that is an administrative record  
10 that you would like to see that is not available at the  
11 library and not available in full sets on the website,  
12 you can request it of us and we will provide it to you, a  
13 hard copy.

14 AUDIENCE: What was the library? I'm  
15 sorry.

16 PAMELA THOMPSON: Middendorf-Kredell.

17 AUDIENCE: Okay.

18 PAMELA THOMPSON: It's the St. Charles  
19 County/City Library, document library. It's on  
20 Highway K.

21 CLARISSA EHEON: I have one more question.

22 RAY PLIENESS: Okay. Why not?

23 CLARISSA EHEON: This uranium that they  
24 found, was it 234, 35 or 38?

25 MARY PICEL: Again, in the chemical plant

1 area, we found all three.

2 CLARISSA EHEON: Because 238 is rather  
3 transient. It moves kind of easy; doesn't it? And what  
4 did you do with that water when you drained it out of the  
5 lake?

6 MARY PICEL: Don't know.

7 CLARISSA EHEON: You put it in another  
8 lake?

9 TOM PAULING: Conservation Department  
10 discharged that water.

11 CLARISSA EHEON: Sorry.

12 TOM PAULING: Conservation Department  
13 discharged that water.

14 CLARISSA EHEON: Where did it go?

15 TOM PAULING: On the ground in this little  
16 off site.

17 CLARISSA EHEON: Oh.

18 RAY PLIENESS: I think I'm going to cut it  
19 off here. I really hate to do this, but in the essence  
20 of time, I'd like to go over the next steps because this  
21 is not the end of the process.

22 I have heard the comments here, and I guess the  
23 reality of this is I don't assume -- I have a daughter  
24 that's twenty-three. I would say without a doubt the  
25 comments I've heard here are what I would say if I was a

1 citizen. I would expect full, complete safety of  
2 everybody that's in my family. Every age.

3 So I can state here, thoroughly and  
4 conservatively, saying I believe this plan to be  
5 effective and reasonable. I also think there's  
6 improvement. That's why we came here today to get public  
7 comments. That's why we have an additional opportunity  
8 to write comments. Don't pass this opportunity up. I  
9 know you won't, but I ask you to also go to your  
10 neighbors.

11 If they have comments, return them please.  
12 Provide those comments to us. Because we will take them  
13 seriously.

14 I think I've been at this site five times on  
15 public venues, and I can honestly say I believe we take  
16 the comments, we provide your response. I don't know  
17 that our responses are always what you want to hear, but  
18 I can assure you we take them seriously and a lot of time  
19 goes into it, because that's what we believe is  
20 important.

21 So with that, at the end of this period, we  
22 will finally have completed draft ROD, that we have  
23 reviewed by EPA and MDNR. Again, at the end of that  
24 period of that review, DOE will publish the final ROD.  
25 It will be available in the newspaper for everybody to

1 see and understand. And whatever outcome that ROD  
2 requires us to do, we will start to implement that  
3 decision in 2004.

4 I think I want to go back to the slide that  
5 identifies where you can send your comments. Mail or fax  
6 any additional comments by September 3rd to Pam here at  
7 the site. There's a fax number or phone number. We're  
8 available to continue to have discussions outside of the  
9 world of the groundwater, anything about this site, until  
10 pretty much at least ten o'clock if anybody's interested.

11 But at this point, I'd like to close the formal  
12 portion of the groundwater ROD proposed plan discussion.  
13 (Thereupon, the meeting adjourned at 9:14 P.M.)

\* \* \* \* \*

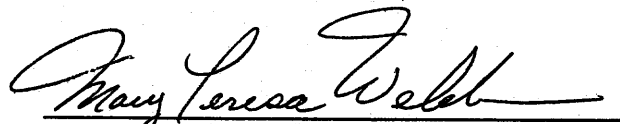
NOTARIAL CERTIFICATION

STATE OF MISSOURI     )  
                                  ) SS.  
COUNTY OF ST. LOUIS )

I, MARY T. WEBB, a Certified Court Reporter and Notary Public duly commissioned and qualified in and for the State of Missouri, do hereby certify that the aforementioned hearing was held on the 13th day of August, 2003, at the Weldon Spring Site, St. Charles, Missouri, Highway 94, County of St. Charles, State of Missouri, that the proceedings taken by stenomask by me and were reduced to typewritten form under my supervision, and that it is a true and accurate record of the proceedings.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 9th day of September, 2003.

My Commission expires April 22, 2007.

  
Notary Public within and for  
the State of Missouri.

